APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,869	02/25/2002	Jae-Woo Roh	DE-1344	4709

7590   03/23/2005

David A Einhorn, Esq.
Anderson Kill & Olick, P.C.
1251 Avenue of the Americas
New York, NY 10020

EXAMINER
KERVEROS, JAMES C

ART UNIT	PAPER NUMBER
2133	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/083,869	ROH ET AL
	Examiner	Art Unit	
	JAMES C KERVEROS	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 November 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This is a Final Office Action in response to AMENDMENT filed 11/15/2004, in

reply to the prior Office Action mailed 8/11/2004. Claims 1-22 are pending.

Claims 7, 14 and 22 rejected under 35 U.S.C. 112, second paragraph, in the

prior Office Action, is hereby withdrawn in view of the amendment to the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under
section 122(b), by another filed in the United States before the invention by the
applicant for patent or (2) a patent granted on an application for patent by
another filed in the United States before the invention by the applicant for patent,
except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application
filed in the United States only if the international application designated the
United States and was published under Article 21(2) of such treaty in the English
language.

2.   Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Chouly

(US 6574775).

Regarding Claims 1 and 8, Chouly discloses a method of decoding encoded data

based on a binary block code, comprising:

Forming an original block group, such as code of length N and dimension K from

a source (2) divided into words of K bits [l.sub.0, . . . , l.sub.k-1] and processed by

encoding means 3 which generate a code word of N bits [b.sub.0, . . , b.sub.N-1],

defined as a reference block, (FIG. 1).

Encoding [b.sub.N-1] original blocks placed after the reference block group to

generate n weighted blocks of n-bit codeword (weighting step 140), each of which

corresponds to an A type weighted block or a B type weighted block (step 110) of input

data [r.sub.0.sup.(j), . . . , r.sub.N-1.sup.(j)] divided into two groups, where one group

corresponding to an A type weighted block (231) S.sub.(j)mod(m), and the other

corresponding to a B type weighted block (232) S.sub.(j)mod(m), as shown in FIG. 2.

Also, decoding means 203 produces the weighted sums [r".sub.0.sup.(j), . . . ,r".sub.N-

1.sup.(j)] stored in the memory 201, FIGS. 5 and 6.

Decoding the n weighted blocks of n-bit codeword of the coding group to

generate n corresponding original blocks of m-bit message using decoding means (203,

FIG. 6) by applying the data [r.sub.i.sup.(j), epsilon.S.sub.(j) mod(m)] to decoding

means 231 for decoding the code C.sub.(j) mod(m), and the data [r.sub.i.sup.(j),

i.epsilon.S.sub.(j)mod(m)] to decoding means 232 for decoding the code

C'.sub.(j)mod(m).

Reconstructing a first original block of m-bit message from the sequence of the

reference bits, such as input data [r.sub.0.sup.(0), . . . , r.sub.N-1.sup.(0)] using

extraction means (21, FIG. 1) which deliver an estimation [I.sub.0, . . . , I.sub.K-1] of

the transmitted data word.

Regarding Claims 2-4 and 9-11, Chouly discloses an n-bit codeword input data

[r.sub.0.sup.(j), . . . , r.sub.N-1.sup.(j)] comprising (A) type weighted block (231)

S.sub.(j)mod(m), and (B) type weighted block (232) S.sub.(j)mod(m), as shown in

FIG. 2. Both words consist of binary code having a bit of "1" and bit of "0", which may

be classified A type weighted block corresponding to bit of "1" and B type weighted

block corresponding to a bit of "0".

Regarding Claims 5-7 and 12-14, Chouly discloses an n-bit codeword input data

[r.sub.0.sup.(j), . . . , r.sub.N-1.sup.(j)], wherein if the original block group is a (2N-1),

where "N" is a positive integer, assuming N=1, 2, 3, 4....N, then (2N-1)= 0, 1, 3, 5...,

thus every ODD number is (A) type weighted block, if the original block group is a 2N,

assuming N=1, 2, 3, 4....N, then 2N=2, 4, 6, 8, ..., then the reference block of n-bit

codeword is a B type weighted block. Regarding Claims 7 and 14, in view of the 35

U.S.C. 112, second paragraph rejection, as best understood, in solving the claimed

relation, where "a"= 0, 1, 2 3, 4 being a positive integer, and n-a= 8-2=6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

3.   Claim 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chouly (US 6574775).

Regarding Claim 15, Chouly discloses an apparatus of decoding encoded data

based on a binary block code, comprising:

A buffering device source (2) for outputting a digitalized image signal such as

code of length N and dimension K from a source (2) divided into words of K bits [I.sub.0,

. . . , I.sub.k-1] and processed by encoding means 3 which generate a code word of N

bits [b.sub.0, . . , b.sub.N-1], defined as a reference block, (FIG. 1).

An encoding part (encoding means 3) for encoding [b.sub.N-1] original blocks

placed after the reference block to generate n weighted blocks of n-bit codeword

(weighting step 140), each of which corresponds to an A type weighted block or a B

type weighted block (step 110) of input data [r.sub.0.sup.(j), . . . , r.sub.N-1.sup.(j)]

divided into two groups, where one group corresponding to an A type weighted block

(231) S.sub.(j)mod(m), and the other corresponding to a B type weighted block (232)

S.sub.(j)mod(m), a shown in FIG. 2. Also, decoding means 203 produces the weighted

sums [r".sub.0.sup.(j), . ,r".sub.N-1.sup.(j)] stored in the memory 201, FIGS. 5 and 6.

A switch for (demultiplexer 230) which applies the data [r.sub.i.sup.(j),

i.epsilon.S.sub.(j)mod(m)] to decoding means (231 and 232) for decoding the code

C.sub.(j)mod(m) and C'.sub.(j)mod(m), respectively and using   weighting means 234

for producing weighted subsequent input data r.sub.i.sup.(j+1) which are stored in the

memory 201, FIG. 6.

A buffer (memory 201) for storing data from the channel [r.sub.0.sup.(0), . . . ,

r.sub.N-1.sup.(0)] and the weighted sums [r".sub.0.sup.(j), . . . ,

r".sub.N-1.sup.(j)], corresponding to an A type weighted block (231) S.sub.(j)mod(m),

and the other corresponding to a B type weighted block (232) S.sub.(j)mod(m), as

shown in FIGS. 2, 5 and 6.

Decoding part (203, FIG. 6) for decoding the n weighted blocks of n-bit codeword

of the coding group to generate n corresponding original blocks of m-bit message using

decoding means (203, FIG. 6) by applying the data [r.sub.i.sup.(j), epsilon.S.sub.(j)

mod(m)] to decoding means 231 for decoding the code C.sub.(j) mod(m), and the data

[r.sub.i.sup.(j), .epsilon.S.sub.(j)mod(m)] to decoding means 232 for decoding the code

C'.sub.(j)mod(m).

Reconstructing a first original block of m-bit message from the sequence of the

reference bits, such as input data [r.sub.0.sup.(0), . . ., r.sub.N-1.sup.(0)] using

extraction means (21, FIG. 1) which deliver an estimation [l.sub.0, . . ., l.sub.K-1] of

the transmitted data word.

Chouly does not explicitly disclose the claimed features of a first control part for

determining whether the original block is a first original block of m-bit message when the

timing signal is first generated from the first buffer and a second control part for

determining whether the weighted block is an A type weighted block or a B type

weighted block. However, Chouly discloses first control part such as router 202 and a

second control part such as demultiplexer 230 (FIG. 6) for applying the input data

[r.sub.i.sup.(j), epsilon.S.sub.(j) mod(m)] to decoding means 231 for generating an A

type weighted block (231) S.sub.(j)mod(m), and a B type weighted block (232)

S.sub.(j)mod(m), as shown in FIG. 6. It would have been obvious to a person having

ordinary skill in the art at the time the invention was made to use decoding means, as taught by Chouly, for determining whether the weighted block input data is an A or a B type, since Chouly already discloses two individual decoding means (231, 232) for decoding A or B type weighted data block, thus providing an optimum decoding by effecting iterations of a non-optimum decoding.

Regarding Claims 16 and 17, Chouly does not explicitly disclose a counting unit for counting the number of the timing signal provided from the first buffer, wherein the counting unit is reset on receiving an (n+1) timing signal generated from the first buffer. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use decoding means, as taught by Chouly, for determining whether the weighted block input data is an A or a B type, since Chouly already discloses two individual decoding means (231, 232) for decoding A or B type weighted data block, thus providing an optimum decoding by effecting iterations of a non-optimum decoding.

Regarding Claims 18-20, Chouly discloses an n-bit codeword input data [$r_0^{(j)}, \ldots, r_{N-1}^{(j)}$] comprising (A) type weighted block (231) $S_{(j)mod(m)}$, and (B) type weighted block (232) $S_{(j)mod(m)}$, as shown in FIG. 2. Both words consist of binary code having a bit of "1" and bit of "0", which may be classified A type weighted block corresponding to bit of "1" and B type weighted block corresponding to a bit of "0".

Regarding Claim 21, discloses an n-bit codeword input data where the sequence

of the reference bits [r.sub.0.sup.(j)] is identical to the bit sequence of the reference

block.

Regarding Claim 22, in view of the 35 U.S.C. 112, second paragraph rejection,

as best understood, in solving the claimed relation, where "a"= 0, 1, 2 3, 4 being a

positive integer, and n-a= 8-2=6.

Response to Arguments

4.   Applicant's arguments filed 11/15/2004 have been fully considered but they are

not persuasive. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated

by Chouly (US 6574775), and Claim 15-22 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Chouly (US 6574775), as set forth in the present Office Action.

In reference to Claims rejected under 35 U.S.C. 102(e) as being anticipated by

Chouly, Applicant argues on page 9, regarding independent Claims 1 and 8, that Chouly

fails to disclose or even imply that the reference block is generated to indicate the type

of the rest of the blocks in the block group, and that Chouly merely discloses the

encoding of the source bits to implement the error correcting method in the

communication system.

In response to Applicant's argument, claims 1 and 8 broadly recite "encoding a

first original block......to a reference block of n-bit codeword, which read on the Chouly

reference of forming an original block of length N and dimension K from a source (2)

divided into words of K bits [l.sub.0, . . . , l.sub.k-1] and encoding the first original block

to a code word of N bits [b.sub.0, . . , b.sub.N-1] corresponding to a reference block of

n-bit codeword (Chouly, Figure 1). In examining the present Application, for example the

claimed limitation of reference block was given the Broadest Reasonable Interpretation,

in accordance with MPEP, section 2111. During patent examination, the pending claims

must be given their broadest reasonable interpretation consistent with the specification.

In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant

always has the opportunity to amend the claims during prosecution, and broad

interpretation by the examiner reduces the possibility that the claim, once issued, will be

interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162

USPQ 541, 550-51 (CCPA 1969).

Further, in response to Applicant's argument that Chouly fails to teach or even

imply the generation of the reference bits to imply the type of the weighted block during

the decoding process, Chouly describes in the Summary of the Invention "weighting

means for calculating weighted sums of said transformed data and received data with

a first and a second weight factor", also described in the Office Action above.

In response to applicant's argument that the references fail to show a feature

recited in the arguments regarding "pixel values in the block is summed up and

represented as a total intensity sum, so that each block is finally classified into one of

the two types of the weighted block" based on the specification, such a feature does not

carry patentable weigh, since the feature upon which applicant relies is not recited in the

rejected claims. Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988

F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In reference to Claims rejected under 35 U.S.C. 103(a) as being unpatentable

over Chouly (US 6574775), Applicant argues on page 11, regarding independent Claim

15, that Chouly is silent on the encoding the source data based on the reference bits

which are not actually transmitted through the channel, and therefore Chouly fails to

reconstruct the reference bits. As indicated above in response to Applicant's argument,

the Examiner broadly interprets the code word of N bits [b.sub.0, . . , b.sub.N-1] to

correspond to a reference block (Chouly, Figure 1), which is processed by encoding

means and transmitted to decoding means for decoding reconstruction.

In response to applicant's argument, on page 12, the Examiner already admitted

in the 103 rejection that Chouly does not explicitly disclose separating the received data

into two categories. However, Chouly discloses a router 202 and a demultiplexer 230

(Figure 6) for applying the input data to decoding means 231 for generating an A type

weighted block (231) and a B type weighted block (232), as shown in FIG. 6. It would

have been obvious to a person having ordinary skill in the art at the time the invention

was made to use decoding means, as taught by Chouly, for determining whether the

weighted block input data is an A or a B type, since Chouly already discloses two

individual decoding means (231, 232) for decoding A or B type weighted data block,

thus providing an optimum decoding by effecting iterations of a non-optimum decoding.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JAMES C KERVEROS whose telephone number is

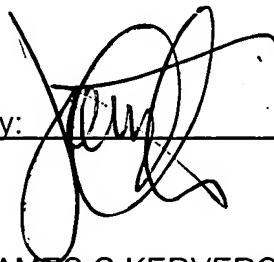(571) 272-3824. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

Randolph Building
401 Dulany Street,
Alexandria, VA 22314
Tel.: (571) 272-3824, Fax: (571) 272-3824
Email: james.kerveros@uspto.gov

By: _____

Date: 15 March 2005
Office Action: Final Rejection

JAMES C KERVEROS
Examiner
Art Unit 2133

Guy J. Lamarre
Primary Examiner